

What is claimed is:

1. A service providing apparatus, comprising:

a first communication unit configured to perform wireless communication with a service receiver located within a first wireless area;

a second communication unit configured to perform wireless communication with said service receiver located within a second wireless area narrower than said first wireless area;

a connection information generator which generates connection information necessary to the communication with said service receiver when the communication is performed through said first communication unit;

an existence detector which detects whether or not said service receiver locates within a prescribed distance;

an existence confirmation request receiver which receives an existence confirmation request signal transmitted by said service receiver, through said second communication unit when detected that said service receiver is located within the prescribed distance;

a connection information transmitter which transmits the connection information generated by said connection information generator to said service receiver through said second communication unit as a reply of said existence confirmation request signal;

an authentication unit configured to authenticate said service receiver which requested connection based on the transmitted connection information, through said first communication unit; and

a service providing unit configured to connect with said service receiver authenticated by said authentication unit and provide the services to said service receiver through said first communication unit.

2. The service providing apparatus according to claim 1, further comprising a first message generator which generates a message notifying that the existence confirmation request signal

from said service receiver can be received.

3. The service providing apparatus according to claim 1, further comprising a second message generator which generates a message notifying that the connection request from said service receiver can be received.

4. The service providing apparatus according to claim 1, further comprising a third message generator which generates a message notifying that connection processing with said service receiver has been completed.

5. The service providing apparatus according to claim 1, further comprising a measurement unit configured to measure the number of said service receivers which has performed the connection request within a prescribed time; and

an authentication determination unit configured to determine whether or not to perform authentication procedure by authentication unit in accordance with the number measured by said measurement unit.

6. The service providing apparatus according to claim 1, further comprising a fourth message generator which generates a message notifying that the number of said service receivers is two or more.

7. The service providing apparatus according to claim 1, further comprising a measurement unit configured to measure the number of said service receivers which perform connection request within a prescribed time; and

an individual authentication unit configured to authenticate said service receivers which has performed the connection request, if the number of said service receivers measured by said measurement unit is two or more, before said authentication unit performs the authentication.

8. The service providing apparatus according to claim 1, further comprising a distance detector which determines whether or not a distance from said service receiver is within a prescribed length,

wherein said connection information transmitter transmits the connection information to said service receiver if said distance detector determines to be within the prescribed length.

9. The service providing apparatus according to claim 1, comprising a distance detector which determines whether or not a distance from said service receiver is within a prescribed length, after the connection request is received from said service receiver through said first communication unit,

wherein said authentication unit performs the authentication procedure if said distance detector determines to be within the prescribed length.

10. The service providing apparatus according to claim 8, wherein said distance detector detects the distance from said service receiver by measuring a radio field intensity of a radio wave transmitted from said service receiver.

11. The service providing apparatus according to claim 9, wherein said distance detector detects the distance from said service receiver by measuring a radio wave intensity of a radio wave transmitted from said service receiver.

12. A service providing program which makes a computer operate the steps of comprising:

performing a first wireless communication with a service receiver located within a first wireless area;

performing a second wireless communication with said service receiver located within a second wireless area narrower than said first wireless area;

generating connection information necessary to communication with said service receiver when performing said

first wireless communication;

detecting whether or not said service receiver locates within a prescribed distance;

receiving an existence confirmation request signal transmitted from said service receiver through said second wireless communication when it is detected that said service receiver locates within the prescribed distance;

transmitting the connection information to said service receiver through said second wireless communication as a reply of said existence confirmation request signal;

authenticating said service receiver which has requested connection based on the transmitted connection information, through said first wireless communication; and

providing services to the authenticated service receiver through said first wireless communication.

13. The service providing program according to claim 12, which makes a computer operate the step of further comprising:

generating a first message notifying that an existence confirmation request signal from said service receiver can be received.

14. The service providing program according to claim 12, which makes a computer operate the step of further comprising:

generating a second message notifying that connection request from said service receiver can be received.

15. The service providing program according to claim 12, which makes a computer operate the step of further comprising:

generating a third message notifying that connection processing with said service receiver has been completed.

16. The service providing program according to claim 12, which makes a computer operate the step of further comprising:

measuring the number of said service receivers which have performed connection request within a prescribed time; and

determining whether or not to perform authentication procedure in accordance with the measured number.

17. The service providing program according to claim 12, which makes a computer operate the step of further comprising:

generating a four message notifying that the number of said service receiver measured by said measuring unit is two or more.

18. The service providing program according to claim 12, which makes a computer operate the step of further comprising:

measuring the number of said service receivers which have performed connection request within a prescribed time; and

authenticating said service receivers which have performed connection request when the number of said service receivers which performed connection request within a prescribed time is two or more, before performing the authentication by said authentication unit.

19. The service providing program according to claim 12, which makes a computer operate the step of further comprising: determining whether or not a distance from said service receiver is within a prescribed length, before said connection information transmitter transmits the connection information,

wherein the connection information is transmitted to said service receiver when determined to be within the prescribed length.

20. The service providing program according to claim 12, which makes a computer operate the step of further comprising: determining whether or not a distance from said service receiver is within a prescribed length,

wherein authentication procedure is performed when determined to be within said prescribed length.

21. A service providing method, comprising:

performing a first wireless communication with a service

receiver located within a first wireless area;

performing a second wireless communication with said service receiver located within a second wireless area narrower than said first wireless area;

generating connection information necessary to communication with said service receiver when performing said first wireless communication;

detecting whether or not said service receiver locates within a prescribed distance;

receiving an existence confirmation request signal transmitted from said service receiver through said second wireless communication when it is detected that said service receiver locates within the prescribed distance;

transmitting the connection information to said service receiver through said second wireless communication as a reply of said existence confirmation request signal;

authenticating said service receiver which has requested connection based on the transmitted connection information, through said first wireless communication; and

providing services to the authenticated service receiver through said first wireless communication.